

Playground Information to Use with the Environment Rating Scales

Based on information from the U.S. Consumer Product Safety Commission, Handbook for Public Playground Safety, Pub. No. 325. These guidelines are a basic overview of areas to review when scoring playground and safety items in the ECERS-R, ITES-R, FDCRS, or SACERS. This list is not to be used as a comprehensive guide for playground assessment.

Catch Points and Protruding Hardware – There should be no dangerous pieces of hardware, such as protruding bolt ends and narrow gaps in metal connections or open "S" hooks at the top and bottom of swings. Exposed hardware can cut children, puncture skin, or catch clothing drawstrings, which could strangle a child. The top of fences less than 4 feet in height also should be checked for protrusions.

Entrapment – Children can get trapped and strangle in openings where they can fit their bodies but not their heads through the space. Therefore openings in guardrails, spaces between platforms, between ladder rungs, and uprights in protective barriers, should measure less than 3.5 inches or more than 9 inches. However, if the ground is the bottom edge of a space between 3.5 inches and 9 inches, it is not considered an entrapment hazard because the child will not be in danger of choking.

Pinch, Crush, Shearing, and Sharp Hazards – Equipment should not have sharp points or edges that could cut skin. Moving pieces of equipment, such as suspension bridges, track rides, merry-go-rounds, or seesaws, should not have accessible moving parts that might crush or pinch a child's finger or other body part.

Protective Barriers – A protective barrier is an enclosing device around an elevated platform that is intended to prevent both inadvertent falls from the platform and deliberate attempts to pass through the barrier. In other words, children should not be able to jump over it or move through it.

For preschoolers, full protective barriers are preferred because they provide more protection from falls. Protective barriers are required for platforms that are over 30 inches above the ground. The top surface of the barrier should be at least 29 inches above the platform. No child should be able to climb over, under or through the barrier. For equipment used *only* by school-aged children, including 5-year-olds, any platform more than 48 inches above the ground requires protective barriers. The top surface of the protective barrier must be at least 38 inches high.

Guardrails – A guardrail is an enclosing device around an elevated platform that is intended to prevent inadvertent falls from the platform. A child might be able to climb over, under or through the guardrail.

For preschoolers through 4 years of age, guardrails prevent falls from elevated platforms that are higher than 20 inches, and up to 30 inches, above the ground. For preschoolers through 4 years of age, the top surface of the guardrails should be at least 29 inches above the platform, and the lower edge should be no more than 23 inches above the platform. For equipment used *only* by school-aged children, including 5-year-olds, any platform more than 30 inches above the ground (but not over 48 inches above the ground) will need guardrails at least 38 inches above the platform, with the lower edge no more than 28 inches above the platform.

When mixed age groups of preschool- and school-aged children use the same equipment (e.g., 4- and 5-year-olds) the most stringent requirements are applied to ensure safety for all. For example, platforms used by the group will require protective barriers, rather than guardrails if they reach the height listed for preschoolers. Guardrails and barriers must be of the height required for school-aged children, which is higher than required for preschoolers.

Platforms that are layered on equipment, (e.g., one platform leading up to another in a step-like manner), so that it would be impossible for preschoolers to fall more than 20 inches from one level to another (or school-aged children to fall 30 inches to another platform) do not require barriers or guardrails if they would interfere with the intended use of the equipment (e.g., stepping up to the next level).

Tripping Hazards – There should be no exposed concrete footings, abrupt changes in surface elevations, tree roots, tree stumps, or rocks, which can trip children or adults.

Protective Surfacing – The surfaces under and around play equipment should be soft enough to cushion falls, which are the most frequent causes of injuries on playgrounds. For specifics on depth of material, see the chart below. When the surfacing in much used areas becomes displaced (e.g., under swings, slides) it should be raked back or replaced to maintain correct depth.

Fall Zones – Resilient surfacing shall extend beyond the external limits of stationary equipment for a minimum of 6 feet. Swings shall have resilient surfacing that extends 2 times the length of the pivot point to the surface below. The surfacing shall be to the front and rear of the swing. Tot swings shall have resilient surfacing that extends 2 times the length of the pivot point to the bottom of the swing seat, both in the front and rear of the swing. Tot swings are defined as swings with enclosed seats. Tire swings shall have resilient surfacing that extends a distance of 6 feet plus the measurement from the pivot point to the swing seat and 6 feet to the side of the support structure.

Equipment Spacing – Play structures should be spaced at least 12 feet apart to allow children space to circulate around or fall without striking another structure. Moving pieces of equipment should be located in an area away from other play structures so children have adequate room to pass from one play area to another without being struck by a moving swing or by another child exiting from a slide.

Critical Heights of Playground Equipment for Various Types and Depths of Resilient Surfaces

Based on Information from the U.S. CONSUMER PRODUCT SAFETY COMMISSION (CPSC Publication No. 325), Handbook for Public Playground Safety. When no requirement is provided for a specific height of equipment, we have used the requirement for the next higher height, so requirements are conservative, erring on the side of safety.

	Wood Chips	Double Shredded Bark	Uniform Wood Chips	Fine Sand	Coarse Sand	Fine Gravel
Equipment Height	**Uncompressed Depths of Materials In Fall Zone					
Five feet or less	6 inches	6 inches	6 inches	6 inches	6 inches	6 inches
Six feet	6 inches	6 inches	6 inches	12 inches	12 inches	6 inches
Seven feet	6 inches	9 inches	9 inches	12 inches	12 inches	9 inches
Eight feet	9 inches	9 inches	12 inches	12 inches	12 inches	12 inches
Nine Feet	9 inches	9 inches	12 inches	12 inches	N/A	12 inches
Ten Feet	9 inches	9 inches	12 inches	N/A	N/A	12 inches

For poured or installed foam or rubber surfaces, the materials must meet the ASTM F1292 requirements. Verify through a written statement from the manufacturer.